

Application No. 10/070,198  
Docket No. AA423  
Filed 03/04/02  
Amendment Dated 10/29/03  
Office Action Dated: 04/29/03

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**REMARKS**

Claims 1 - 10 are pending in the present application.

Claims 1-10 have been amended to more specifically characterize the present invention as a rinse-off hair care composition. Support for such amendments is found in the specification on page 5, lines 7-31.

Claims 1, 8 and 10 have been amended to more specifically characterize the present invention. Claims 1 and 8 have been amended to incorporate the matter of Claim 3 and Claim 5. Claim 10 has been amended to incorporate the matter of Claim 5. Support for such amendments is found in the claims, as originally filed. Further discussion regarding these claim amendments has been incorporated into the remarks to follow.

Claims 7 and 10 have been amended to delete the term "about" for b, c and d. Such amendments should remove the claim rejection for Claims 7 and 10 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to point out and distinctly claim the subject matter which applicant regards as the invention. Applicants respectfully request reconsideration.

It is believed these changes do not involve any introduction of new matter. Consequently, entry of these changes is believed to be in order and is respectfully requested.

**Invention Synopsis**

The present application discloses a hair care composition comprising a polypropylene glycol having a weight average molecular weight of from 1,000 g/mol to about 60,000 g/mol; an ester oil of the formula:  $R^1COOR^1$  (Formula V), wherein each  $R^1$  is independently a  $C_1$ - $C_{22}$  alkyl, and wherein the HLB value of the ester oil is less than about 4; and a gel matrix comprising a cationic surfactant, a solid fatty compound, and water; further wherein the polypropylene glycol has a solubility in water of less than about 1 g/100 g water.

**1) Rejection Under 35 USC 103(a) over the combination of WO 95/20939 ('939) and WO 98/24402 ('402).**

Claims 1-5, and 7-10 have been rejected under 35 USC 103(a) as being unpatentable over the combination of WO 95/20939 ('939) and WO 98/24402 ('402). Applicants respectfully traverse this rejection.

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The basis for the Examiner's objection states that WO '939 teaches hair care compositions comprising polypropylene glycol and a gel matrix comprising a cationic surfactant solid fatty compound and water. '939 does not teach an ester oil or alkylalkoxylate. However, the Examiner further states that WO '402 teaches hair care compositions using oils. And also teaches fatty compounds, cationic surfactants, water and PPG. Therefore it would have been obvious to prepare the compositions of '039 and combine it with the oils and alkylalkoxylate of '402. The Examiner further states the motivation to use the oils from the teachings of '402 is that the compositions provide excellent conditioning and smoothness. The Examiner states that absent a showing side by side comparison of all ingredients claimed versus compositions without ingredient 1 (PPG) claimed giving unexpected and superior results, are rendered obvious over the combination of the WO references. Applicants respectfully traverse this rejection based on the following remarks.

The present invention, as now amended, discloses a hair care composition comprising a polypropylene glycol (PPG) having a weight average molecular weight of from 1,000 g/mol to about 60,000 g/mol; an ester oil of the formula:  $R^1COOR^1$  (Formula V), wherein each  $R^1$  is independently a  $C_1$ - $C_{22}$  alkyl, and wherein the HLB value of the ester oil is less than about 4; and a gel matrix comprising a cationic surfactant, a solid fatty compound, and water; further wherein the polypropylene glycol has a solubility in water of less than about 1 g/100 g water. Specifically, the present invention now requires that the PPG is water-insoluble i.e. solubility in water of less than about 1g/100 g water. And further, as now amended, requires a PPG having a weight average molecular weight of from 1,000 g/mol to about 60,000 g/mol. A PPG having a molecular weight of greater than 1,000 g/mol, is generally water-insoluble.

In the present invention, the surprising benefit of "water-insoluble" PPG is improved deposition on the hair. The present invention describes on page 5 of the specification, that water-soluble PPG is easily washed away before it effectively deposits on hair and provides the desired benefit(s). Polyethylene glycol (PEG) is also a water-soluble material which is easily washed away before providing the benefit.

However, there is no description in either '939 or '402 regarding the relationship between the combination of these claimed specific materials and the benefit of water-insoluble PPG compared to water soluble PPG / PEG. Thus there is no motivation in '939 or '402 to use the specified water-insoluble PPG of the present invention, wherein the polypropylene glycol has a solubility in water of less than about 1 g/100 g water, in combination with an ester oil, and a gel matrix comprising a cationic surfactant, a solid fatty compound and water. Further, no motivation

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in '939 or '402 to use PPG having a weight average molecular weight of from about 1,000 g/mol to about 60,000 g/mol, in order to specifically obtain water-insoluble PPG. The mere recitation in '939 that the composition may comprise a polymer of ethylene oxide and/or propylene oxide clearly would not lead one of skill in the art to the revelation of the present invention, that surprising benefit of "water-insoluble" PPG providing improved deposition on the hair and thus improved conditioning benefits.

In order to establish a *prima facie* case of obviousness, the Examiner must show that (1) there is some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, (2) there is a reasonable expectation of success, and (3) all of the limitations of the claims are taught or suggested in the prior art (M.P.E.P. § 2143). In the present case, the Examiner has not provided the requisite motivation to modify either '939 or '402 so as to obtain Applicants' invention. Unlike Applicants, '939 or '402, or the combination of '939 and '402, do not recognize the surprising benefit of "water-insoluble" PPG for improved deposition on the hair. The present invention describes that water-soluble PPG is easily washed away before it effectively deposits on hair and provides the desired benefit(s). Polyethylene glycol (PEG) is also a water-soluble material which is easily washed away before providing the benefit. Applicants disclose an "improved deposition system" wherein Applicants recognize the beneficial interactions of the components of such a system.

Further, '939 and '402 do not teach or suggest all of Applicants' claim limitations and therefore, does not establish a *prima facie* case of obviousness (see MPEP 2143.03). Specifically, '939 and '402 do not teach the claim limitation wherein a PPG has a solubility in water of less than about 1 g/100 g water combined with the claim limitation wherein the polypropylene glycol has a weight average molecular weight of from about 1,000 g/mol to about 60,000 g/mol. By this combination, along with an ester oil and gel matrix, the present invention can provide a surprising and improved deposition benefits to the hair and thus improved conditioning benefits. Clearly, neither '939 nor '402 disclose nor makes obvious this component of the present invention.

Lastly, even if a *prima facie* case was established, the obviousness argument is overcome by Applicants' showing of unexpected results. Therefore, Applicants' contend that the claimed invention is unobvious and that the rejection should be withdrawn. Further, as '939 and '402 do not recognize the relationship between water-insoluble PPG and improved deposition hair benefits, there is no motivation to specifically select water-insoluble PPG having a solubility in

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water of less than about 1 g/100 g water. Therefore, the '939 and '402 neither disclose nor make obvious the present invention.

**2) Rejection Under 35 USC 103(a) over the combination of WO 95/20939 ('939) and WO 98/24402 ('402) and further in view of US Patent 5,916,548 ('548).**

Claim 6 has been rejected under 35 U.S.C. 103 (a) as being unpatentable over WO documents '939 and '402 as applied to Claims 1-5, and 7-10 above, and further in view of U.S. Patent 5,916,548. Applicants respectfully traverse this rejection.

Applicants request Examiner to consider remarks made above with regard to traversing the rejection of Claims 1-5, and 7-10 under 35 U.S.C. 103 (a), as such remarks would equally apply to the rejection of Claim 6. '548 discloses hydrophobically modified cellulose ethers. However, for the reasons outlined above, a *prima facie* case of obviousness has not been established in order to render Claim 6 as unpatentable. In the present case, the Examiner has not provided the requisite motivation to modify either '939 or '402, further in view of '548, so as to obtain Applicants' invention. Further, '939 and '402, further in view of '548, do not teach or suggest all of Applicants' claim limitations and therefore, does not establish a *prima facie* case of obviousness (see MPEP 2143.03). Specifically, '939 and '402, further in view of '548 do not teach the claim limitation wherein a PPG has a solubility in water of less than about 1 g/100 g water combined with the claim limitation wherein the polypropylene glycol has a weight average molecular weight of from about 1,000 g/mol to about 60,000 g/mol.

In summary, neither '939 and '402, or '939 and '402 further in view of '548, establish a *prima facie* case of obviousness because there is no suggestion or motivation to modify the references. Secondly, the cited references do not teach or suggest all of Applicants' claim limitations and therefore, does not establish a *prima facie* case of obviousness. Thirdly, even if a *prima facie* case was established, the obviousness argument is overcome by Applicants' showing of unexpected results, i.e. providing surprising hair deposition benefits by the use of water-insoluble PPG wherein a PPG has a solubility in water in less than about 1 g/ 100 g combined with the claim limitation wherein the polypropylene glycol has a weight average molecular weight of from about 1,000 g/mol to about 60,000 g/mol. Therefore, Applicants' contend that the claimed invention is unobvious and that the rejection should be withdrawn.

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Conclusion

In light of the above remarks, it is requested that the Examiner reconsider and withdraw the rejection under 35 U.S.C. 112, second paragraph and 35 U.S.C. 103(a). Early and favorable action in the case is respectfully requested.

Applicants have made an earnest effort to place their application in proper form and to distinguish the invention as now claimed from the applied references. In view of the foregoing, Applicants respectfully request reconsideration of this application, entry of the amendments presented herein, and allowance of Claims 1-10.

Respectfully submitted,

Jian-Zhong Yang et al

By Linda M. Sivik

Linda M. Sivik  
Agent for Applicant(s)  
Registration No. 44,982  
(513) 626-4122

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